

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A radiation-emitting semiconductor component with a layer structure comprising
  - an n-doped confinement layer[[ (14; 34)]],
  - a p-doped confinement layer[[ (22; 38)]], and
  - an active, photon-emitting layer[[ (18; 36)]] disposed between said n-doped confinement layer[[ (14; 34)]] and said p-doped confinement layer[[ (22; 38)]], ~~characterized in that wherein~~
    - said n-doped confinement layer[[ (14; 34)]] is doped with a first n-dopant for producing high active doping and/or a sharp doping profile and
    - said active layer[[ (18; 36)]] is doped with a second n-dopant, different from the first dopant, for improving the layer quality of said active layer.
2. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1, ~~characterized in that wherein~~ said first n-dopant serves to produce high active doping and/or a sharp doping profile.
3. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 1[[ or 2]], ~~characterized in that~~ wherein said second n-dopant serves to improve the layer quality of said active layer[[ (18; 36)]].
4. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 3~~ claim 1, ~~characterized in that~~ wherein said n-doped confinement layer[[ (14;

34)])] is doped both with said first n-dopant and with an additional dopant, particularly with said second n-dopant.

5. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 4~~ claim 1, characterized in that wherein said semiconductor component is an LED[[ (30)]].

6. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 5, characterized in that wherein said active layer[[ (36)]] of said LED is formed by a homogeneous layer.

7. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 5, characterized in that wherein said active layer[[ (36)]] of said LED is formed by a quantum well or a multiple quantum well.

8. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 4~~ claim 1, characterized in that wherein said semiconductor component is a laser diode[[ (10)]] in which a first waveguide layer[[ (16)]] is disposed between said active layer [[(18)]] and said n-doped confinement layer[[ (14)]] and a second waveguide layer[[ (20)]] is disposed between said active layer[[ (18)]] and said p-doped confinement layer[[ (22)]].

9. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 8, characterized in that wherein said first waveguide layer[[ (16)]] is undoped.

10. (Currently Amended) The radiation-emitting semiconductor component as recited in claim 8, characterized in that wherein said first waveguide layer[[ (16)]] is doped with said second n-dopant.

11. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 8 to 10~~ claim 8, characterized in that wherein said second waveguide layer[[ (20)]] is undoped.

12. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 11~~ claim 1, characterized in that wherein silicon is used as said first n-dopant.

13. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 12~~ claim 1, characterized in that wherein telluride is used as said second n-dopant.

14. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 13~~ claim 1, characterized in that wherein said p-doped confinement layer[[ (22; 38)]] is doped with magnesium, carbon or zinc.

15. (Currently Amended) The radiation-emitting semiconductor component as recited in ~~one of claims 1 to 14~~ claim 1, characterized in that wherein said layer structure[[ (14-22; 34-38)]] is formed on the basis of AlInGaP, AlGaAs, InGaAlAs or InGaAsP.

16. (New) The radiation-emitting semiconductor component as recited in claim 2, wherein said second n-dopant serves to improve the layer quality of said active layer.